

Amendments to the Claims

The below listing of the claims will replace all prior versions, and listings, of the claims in the application:

- 1 1. (Currently Amended) An optical switch device, comprising:
2 a switch fabric;
3 a plurality of input ports through which incoming data contained in a bearer signal
4 passes to the switch fabric, the plurality of input ports to receive the data from a wave
5 division demultiplexer;
6 a plurality of output ports through which outgoing data passes from the switch
7 fabric to transmit the data to a wave division multiplexer;
8 a first demultiplexing device coupled to at least one of the plurality of input ports
9 to inject an optical connection verification signal into the switch fabric;
10 a signal generator coupled to the first demultiplexing device for injecting [data]
11 the connection verification signal into the switch fabric at a frequency that is different
12 from a frequency of the bearer signal; and
13 a first multiplexing device coupled to at least one of the plurality of output ports;
14 and
15 a first signal analyzer coupled to the first multiplexing device for analyzing the
16 data injected by the signal generator.
- 1 2. (Currently Amended) The device according to claim 1, further including a
2 second signal analyzer coupled to the first multiplexing [switch] device and a
3 multiplexer coupled between the first and second analyzers and the first
4 multiplexing device.
- 1 3. (Currently Amended) The device according to claim 1, further including a
2 second demultiplexing device coupled to at least one of the plurality of input ports
3 and a second signal analyzer coupled to the second demultiplexing [switch]
4 device for analyzing data extracted from the input ports on a polling basis.

1 4. (Original) The device according to claim 1, wherein the switch fabric includes
2 first and second switch fabrics.

1 5. (Currently Amended) The device according to claim [1] 4, wherein at least one of
2 the plurality of input ports includes a splitter for splitting a signal incoming to the
3 at least one input port into first and second signal, wherein the first signal is
4 received by the first switch fabric and the second signal is received by the second
5 switch fabric.

1 6. (Original) The device according to claim 5, wherein at least one of the plurality of
2 output ports can receive signals from each of the first and second switch fabrics.

1 7. (Original) The device according to claim 6, further including at least one signal
2 analyzer coupled to one or more of the plurality of output ports for analyzing data
3 from the first and second switch fabrics.

1 8. (Original) The device according to claim 1, further including an add/drop
2 multiplexer coupled to the switch fabric.

1 9. (Currently Amended) A method for achieving bit level access to data in an optical
2 switch, comprising:

3 [injecting a signal from a first signal generator into a switch fabric via a first
4 demultiplexing device;

5 extracting the first signal via a multiplexing switch and analyzing the extracted
6 first signal]

7 coupling a plurality of input ports through which incoming data contained in a
8 bearer signal passes to a switch fabric, the plurality of input ports receiving the data from
9 a wave division demultiplexer;

10 coupling a plurality of output ports through which outgoing data passes from the
11 switch fabric to transmit the data to a wave division multiplexer;

12 coupling a first demultiplexing device to at least one of the plurality of input ports
13 to inject an optical connection verification signal into the switch fabric;

14 coupling a signal generator to the first demultiplexing device for injecting the
15 connection verification signal into the switch fabric at a frequency that is different from a
16 frequency of the bearer signal; and
17 coupling a first multiplexing device to at least one of the plurality of output ports;
18 and
19 coupling a first signal analyzer to the first multiplexing device for analyzing the
20 data injected by the signal generator.

1 10. (Currently Amended) The method according to claim 9, further including
2 verifying a connection between an input port of the optical switch and an output port of
3 the optical switch [from the extracted first signal].
4

1 Claims 11-20 (Cancelled).
2

1 21. (New) The method according to claim 9, further including coupling a second
2 signal analyzer to the first multiplexing device and a multiplexer coupled between the
3 first and second analyzers and the first multiplexing device.

1 22. (New) The method according to claim 9, further including coupling a second
2 demultiplexing device to at least one of the plurality of input ports and a second signal
3 analyzer coupled to the second demultiplexing device for analyzing data extracted from
4 the input ports on a polling basis.

1 23. (New) The method according to claim 9, wherein the switch fabric includes first
2 and second switch fabrics.

1 24. (New) The method according to claim 23, wherein at least one of the plurality of
2 input ports includes a splitter for splitting a signal incoming to the at least one input port
3 into first and second signal, wherein the first signal is received by the first switch fabric
4 and the second signal is received by the second switch fabric.

1 25. (New) The method according to claim 24, wherein at least one of the plurality of
2 output ports can receive signals from each of the first and second switch fabrics.

1 26. (New) The method according to claim 25, further including coupling at least one
2 signal analyzer to one or more of the plurality of output ports for analyzing data from the
3 first and second switch fabrics.